

# Nokia Remote Camera

## User guide

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# CE 168

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CLASS 1 LED PRODUCT

EN 60825-1/A2:2001

Issue 2 EN, 9233582

# For your safety

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Read these simple guidelines. Not following them may be dangerous or illegal.



## **SWITCH ON SAFELY**

Do not switch the device on when wireless phone use is prohibited or when it may cause interference or danger.



## **ROAD SAFETY COMES FIRST**

Do not install the device in a vehicle. Do not use the device or your mobile phone to control or configure the device while driving; park the vehicle first.



## **INTERFERENCE**

All wireless devices may be susceptible to interference, which could affect performance.



## **SWITCH OFF IN HOSPITALS**

Follow any restrictions. Switch the device off near medical equipment.



## **SWITCH OFF IN AIRCRAFT**

Follow any restrictions. Wireless devices can cause interference in aircraft.



## **SWITCH OFF WHEN REFUELLING**

Don't use the device at a refuelling point. Don't use near fuel or chemicals.



## **SWITCH OFF NEAR BLASTING**

Follow any restrictions. Don't use the device where blasting is in progress.



## **USE SENSIBLY**

Use only in the normal position as explained in the product documentation.



## **QUALIFIED SERVICE**

Only qualified personnel may repair this product.



## **ENHANCEMENTS AND BATTERIES**

Use only approved enhancements and batteries. Do not connect incompatible products.



## **BACKUP COPIES**

Remember to make back-up copies or keep a written record of all important information.



## **CONNECTING TO OTHER DEVICES**

When connecting to any other device, read its user guide for detailed safety instructions. Do not connect incompatible products.

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# 1. Introduction

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The Nokia Remote Camera is an imaging device with a motion detector, thermometer, and microphone. With the camera you can capture still images and video clips remotely, and send them to your multimedia messaging (MMS) enabled mobile phone, or to an e-mail address. You control and configure the camera with text messages (SMS) or with the Remote Camera Manager application that can be downloaded from the camera to a compatible phone. See "Download Remote Camera Manager" on page 18.

The camera can be used outdoors when powered with the Nokia power supply AC-12 found in the camera sales package. Do not expose the camera to rain.

To use the Nokia Remote Camera, you need the following:

- A GPRS enabled mobile subscription with a SIM card and MMS service.
- An MMS and SMS enabled mobile phone with a colour display.
- GSM/GPRS network coverage and MMS service coverage with adequate signal strength in the phone and camera premises.
- An available e-mail address, if you want to receive images to your e-mail.



**Note:** National laws and regulations may place restrictions on recording images and regarding further processing and use of such data. Do not use this feature illegally. Honour the privacy and other legitimate rights of others and obey all laws governing, for example, data protection, privacy, and publicity.



**Note:** Only devices that offer compatible multimedia message or e-mail features can receive and display multimedia messages.



**Important:** E-mail messages or multimedia message objects may contain viruses or otherwise be harmful to your device or PC. Do not open any attachment if you are not sure of the trustworthiness of the sender.



**Note:** Check how large MMS messages your compatible mobile phone is capable of receiving. Your network operator may also restrict the size of MMS messages. Ask your network operator for details.

The images and messages sent from the camera are charged to the subscription of the SIM card in the camera.

Your device supports the sending of text messages beyond the normal 160-character limit. If your message exceeds 160 characters, it is sent as a series of two or more messages.

## ■ About your camera

The wireless device described in this guide is approved for use on the GSM 900/1800 network. Contact your service provider for more information about networks.

When using the features in this device, obey all laws and respect the privacy and legitimate rights of others.



**Warning:** To use any features in this device, the device must be switched on. Do not switch the device on when wireless device use may cause interference or danger.

## ■ Network services

To use the device you must have service from a wireless service provider. Some networks may have limitations that affect how you can use network services. For instance, some networks may not support all language-dependent characters and services.

Before you can use any of these network services, you must subscribe to them through your service provider and obtain instructions for their use from your service provider.



**Note:** For availability, rates, and information on using SIM services, contact your SIM card vendor, e.g. network operator, service provider, or other vendor.

## ■ Battery information

The Nokia Remote Camera contains a back-up battery which is used when there is a mains power cut. Therefore, the camera is not switched off during a mains power cut, unless the back-up battery runs out.

### Batteries and power supply

Check the model number of any power supply before use with this device. This device is intended for use when supplied with power from the Nokia power supply AC-12.



**Warning:** Use only batteries, power supplies, and enhancements approved by Nokia for use with this particular model. The use of any other types may invalidate any approval or warranty, and may be dangerous.

For availability of approved enhancements, please check with your dealer.

When you disconnect the power cord of any enhancement, grasp and pull the plug, not the cord.

Your device and its enhancements may contain small parts. Keep them out of reach of small children.

Always switch the device off and disconnect the power supply before removing the battery.

### Charge and discharge

The back-up battery can be used hundreds of times but it will eventually wear out. When the usage time is noticeably shorter than normal, buy a new battery. Use only Nokia approved batteries.

If left unused, a fully charged battery will lose its charge over time. Temperature extremes can affect the ability of your battery to charge.

Use the battery only for its intended purpose. Never use any charger or battery that is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the positive (+) and negative (-) terminals of the battery. (These look like metal strips on the battery.) This might happen, for



example, when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places will reduce the capacity and lifetime of the battery. A device with a hot or cold battery may not work temporarily, even when the battery is fully charged. Battery performance is particularly limited in temperatures well below freezing.

Do not dispose of batteries in a fire! Dispose of batteries according to local regulations. Please recycle when possible. Do not dispose as household waste.

## ■ Wet and damp conditions

The operating temperature for the device is -20°C to +50°C. You can use the device (including the Nokia power supply AC-12) in normal outdoor conditions within the limits of the operating temperature. Do not submerge the device in water. Do not install the device in places where it can get exposed to rain. Attach the outdoor shield to the camera when using the camera outdoors.

If the device or the system connector has been exposed to salt water, wipe it clean with a soft cloth dipped in freshwater to avoid corrosion. The device must be carefully wiped dry.

Before opening the back cover, dry the device to prevent water from reaching the interior of the device. The SIM card and battery are not water resistant.

Never charge the device when the power connector is wet or damp.

Never use a damp device with enhancements that have an electrical function.



**Note:** Make sure the interior of your device and the back cover seals are dry, clean, and free of any foreign objects. Foreign objects may damage the seals against water.



**Important:** Enhancements to be used with this device do not meet the same durability or water resistance specifications as the device itself.



**Important:** Do not connect the power supply to a mains outlet when damp or wet.

## ■ Sales package contents

The sales package of the Nokia Remote Camera includes the following:

- Nokia Remote Camera
- Back-up battery BL-5C
- Power supply AC-12
- Stand cover
- Assembly kit for mounting the camera onto a wall or ceiling
- Outdoor shield for additional protection of the camera against heat and rain
- User guide

## ■ Camera features

The camera has the following parts:

- Light indicators (1)
- Button for switching on the camera and entering the PIN code (2)
- Buttons for opening the back cover (3)
- Infrared light sources for capturing images and video clips in low light (4)
- Motion detector (5)

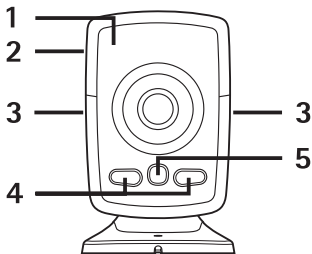


Figure 1

## 2. First start-up

- 1 To remove the back cover of the camera, press the buttons on the side (1) and slide the cover in the direction of the arrow (2).



**Note:** Before removing the cover, always switch off the power and disconnect the power supply and any other device. Avoid touching electronic components while changing the covers. Always store and use the device with the covers attached.

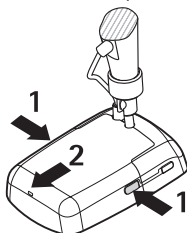


Figure 2

- 2 Open the battery lid, and release the SIM card holder.

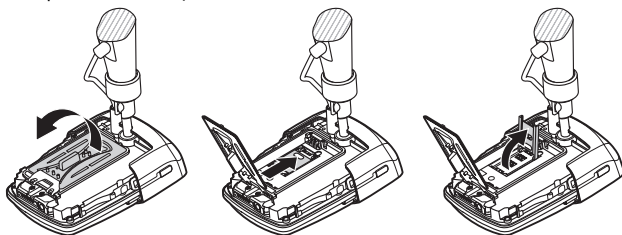


Figure 3

- 3 Insert your SIM card into the SIM card holder as shown in Figure 4. Close the SIM card holder.

Keep all SIM cards out of the reach of small children. For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.

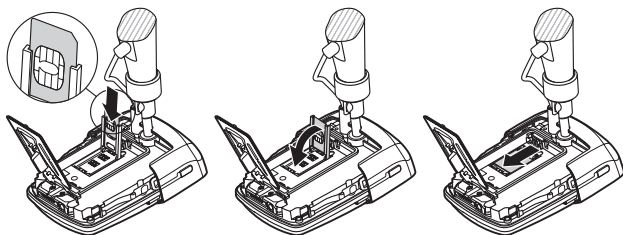


Figure 4

- 4 Insert the battery, close the battery lid, and replace the back cover. Always switch the device off and disconnect the charger before removing the battery.

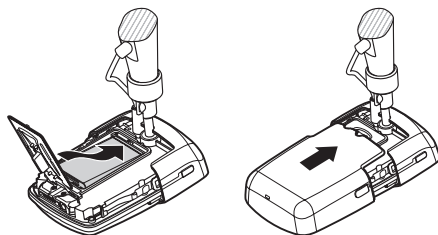



Figure 5

- 5 Connect the power supply to the mains outlet, and connect the power supply to the bottom of the camera stand. Wait for 15 seconds for the camera to start charging (the light indicator  starts to blink green). The power supply also charges the back-up battery.

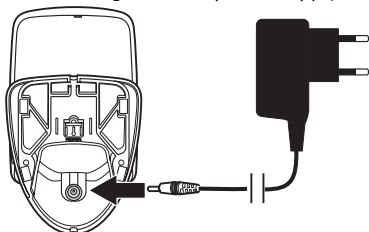


Figure 6

Check the model number of any charger or power supply before use with this device. This device is intended for use when supplied with power from the Nokia power supply AC-12.



**Warning:** Use only batteries, power supplies, and enhancements approved by Nokia for use with this particular device. The use of any other types may invalidate any approval or warranty, and may be dangerous.

For availability of approved enhancements, please check with your dealer. When you disconnect the power cord of any enhancement, grasp and pull the plug, not the cord.

- 6 Press the power button (1) for 2 seconds to switch on the camera. The light indicators scroll up and down (2).

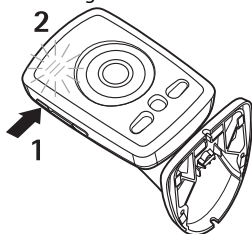


Figure 7



**Warning:** Do not switch on the Nokia Remote Camera when wireless phone use is prohibited or when it may cause interference or danger.

- 7 If the PIN code query is disabled on the SIM card, proceed to step 8. If the PIN code query is enabled on the SIM card, the light indicators blink the letter **■** and you must enter the PIN code of the SIM card:

Press the power button with short presses until the first digit of the PIN code appears on the light indicators. Wait for 3 seconds. When the light indicator **□** blinks, press the power button with short presses until the second digit of the PIN code appears on the light indicators. Repeat until you have entered the entire PIN code. If you miss a digit, keep pressing the power button until the digit re-appears.

If you enter a wrong digit, press the power button with short presses until the letter **E** is displayed. Wait for 3 seconds, and re-enter the PIN code from the start.

When you have entered all the digits of the PIN code, wait for 10 seconds. If you entered the PIN code correctly, the light indicators scroll up and down until the camera is connected to the network. The camera stores the PIN code in its memory and uses it automatically each time the camera is switched on.

If you entered the PIN code incorrectly, the light indicators blink red, and you must enter the PIN code again.

If you enter a wrong PIN code three times in a row, the SIM card is blocked. To unblock the SIM card, insert the SIM card to your compatible mobile phone, and enter the PIN unblocking key (PUK) code, enter the PIN code twice, and reinsert the SIM card in the camera. For details about the PUK code, contact your service provider.

- 8 Set yourself as the master user of the camera using your own mobile phone. The camera can only be configured with the master user's mobile phone.

Create a user name for yourself, and send the following text message to the phone number of the SIM card in the camera:

6 ↵ your user name

↵ indicates a space.

The maximum length of the user name is 20 characters and it must not contain any special characters or spaces.

Example:



6 Helen

You are now set as the master user of the camera. See "User settings" on page 33.

The camera sends you a confirmation message when it has completed your request.

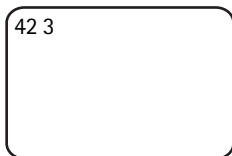
- 9 The camera starts searching for an MMS access point. The MMS access point contains all the settings needed to send multimedia messages. When the camera finds an access point, it sends you a text message.

If the camera finds several access points, it sends you a list of the access points. Select an access point, and send the following command to the camera:

42 ↵ number of access point in the list

↵ indicates a space.

Example:



Now the camera uses the access point that was third on the access point list.

If the camera sends you a message that the MMS settings were not defined, you must configure the settings manually. See "Access point settings" on page 48.

The camera is now ready for use.

## ■ Mount the camera



**Warning:** In order to comply with RF exposure requirements for mobile transmitting devices, a minimum distance of 20 cm must be maintained between the camera and all persons.

Do not place the camera in direct sunlight. The temperature of the camera may become too high.

Do not expose the camera to rain.

## Note on motion detection

Motion detection is based on changes in the surrounding temperature, and thus it may react to flows of warm air, for example, when opening a door, if the camera is pointed towards the door. Also the distance from which the camera detects motion depends on the surrounding temperature: the greater the difference between the surrounding temperature and human body temperature, the farther the camera detects motion.

The camera does not detect motion if there are walls or windows obstructing heat between the moving object and the camera.

Figure 8 presents the coverage area of the motion detector. Position the camera so that the detected persons walk across the coverage area; not directly towards the camera.

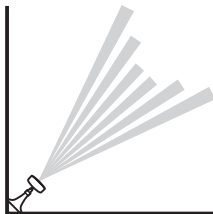


Figure 8

## Coverage area in normal room temperature

Motion detector	Maximum detection distance	Maximum detection width
Normal, zoom: off (default mode)	5 metres	3.5 metres
Normal, zoom: on	5 metres	2 metres
Sensitive, zoom: off	8 metres	6 metres
Sensitive, zoom: on	8 metres	3.5 metres

## Mount the camera on a wall or ceiling

- 1 Place the camera on the wall or ceiling, and attach it with the assembly kit available in the sales package.



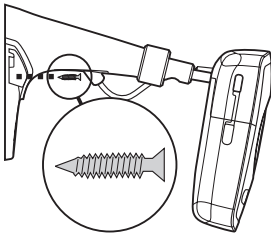


Figure 9

- 2 Attach the stand cover.

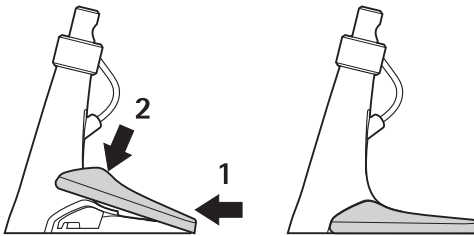


Figure 10

- 3 Turn the camera in the desired position, and tighten the screw. Mind the power cord when turning the camera.

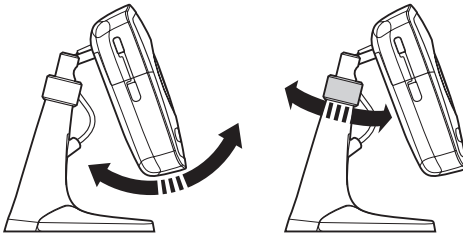


Figure 11

- 4 If you use the camera outdoors, attach the outdoor shield.

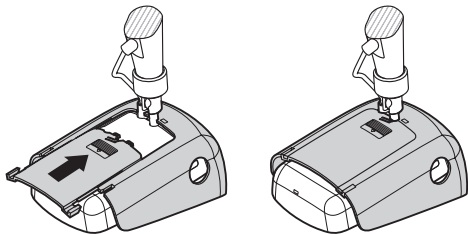


Figure 12

## Place the camera on a desk

- 1 Turn the camera in the desired position, and tighten the screw as shown in Figure 11.
  - 2 Attach the stand cover to the camera. See "Figure 10" on page 17.
- To remove the stand cover, press the hole in the stand cover with a pin or a small screw driver, and lift the stand cover.

## ■ Switch off the camera

To switch off the camera, press the power button for a few seconds. The camera then sets off motion detection, timed imaging, and the temperature alarm.

## ■ Download Remote Camera Manager

You can use the camera with text messages (see "Basic use" on page 20), or you can download a graphical software application, Remote Camera Manager, from the camera to your compatible mobile phone, and use the camera with Bluetooth wireless technology or text messages. The application is compatible with devices such as the Nokia 3650, Nokia 3660, Nokia 6600, Nokia 6630, Nokia 6670, Nokia 7610, Nokia 7650 phones, and the N-Gage and N-Gage QD mobile game deck devices, and is downloaded using Bluetooth wireless technology. See [www.nokia.com](http://www.nokia.com) for the latest compatibility information.

- 1 Find out the Bluetooth address of your phone from the user guide or the sales package of your phone. If you are using a Nokia mobile

phone, enter the code \*#2820#. The Bluetooth address is displayed on the phone.

- 2 Ensure that Bluetooth is switched on in the phone. You must be within 10 metres of the camera to use Bluetooth wireless technology.
- 3 Send the following text message to the camera:

82 ─ Bluetooth address of your phone

The camera creates a Bluetooth connection to your mobile phone, and your phone starts downloading Remote Camera Manager from the camera. You can use and configure the camera with Remote Camera Manager. For further instructions, see the Remote Camera Manager help application.

All camera users can download Remote Camera Manager to their mobile phones.

Remote Camera Manager uses text messages to operate the camera, but if you are within 10 metres of the camera, you can set up a Bluetooth connection between the camera and your mobile phone. Changing the camera settings with Bluetooth is free.

To establish a Bluetooth connection, open the Remote Camera Manager application, and select **Options > Use Bluetooth**. When creating the first Bluetooth connection, Remote Camera Manager asks you for a passcode. The master user enters the master user passcode; for other users the camera issues a unique passcode when creating the connection.

If you operate the camera with text messages using Remote Camera Manager, the application retrieves all confirmation messages sent by the camera automatically from the inbox.

## ■ Nokia support on the Web

See [www.nokia.com/support](http://www.nokia.com/support) or your local Nokia Web site for the latest version of this guide, additional information, downloads, and services related to your Nokia product.

## 3. Basic use

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You can operate the camera by sending text messages to the camera or with the Remote Camera Manager application. See "Download Remote Camera Manager" on page 18. Remote Camera Manager enables establishing a wireless Bluetooth connection between the camera and a mobile phone if they are within 10 metres of each other. Configuring the camera using Bluetooth is free.

The master user of the camera has the right to use all camera functions. If other users are added to the camera, their rights are limited. For information on user rights and adding new users, see "User settings" on page 33.

You can send several commands in one text message by separating the commands with a comma.

When you send a text message to the camera, the camera sends you a confirmation message when it has completed your request.

### ■ Capture images

Once you have set up the camera and switched it on, you can capture images and video clips. The camera sends the images and video clips to your mobile phone or e-mail address. You can capture images by sending a text message or using Remote Camera Manager.



**Note:** National laws and regulations may place restrictions on recording images and regarding further processing and use of such data. Do not use this feature illegally. Honour the privacy and other legitimate rights of others and obey all laws governing, for example, data protection, privacy, and publicity.


└ indicates a space.

**To capture a still image** and have it sent to your preferred address (mobile phone or e-mail), send the following text message to the camera:

1


Images captured in the dark are in greyscale.

To set the preferred address, see "User settings" on page 36.

When the camera is sending the image, the light indicator  blinks green.

**To capture a video clip** and have it sent to your preferred address (mobile phone or e-mail), send the following text message to the camera:

1 ↵1

When the camera is sending the video clip, the light indicator  is orange.

**To capture a still image and send it to another mobile phone**, send the following text message to the camera:

1 ↵phone number

Example:

1 8765432

**To capture a still image and send it to an e-mail address**, send the following text message to the camera:

1 ↵e-mail address

**To capture a video clip and send it to an e-mail address**, send the following text message to the camera:

1 ↵1 ↵e-mail address

**To attach a message to the image**, write the message at the end of the text message in quotation marks.

Example:

1 8765432 "This is my new house!"

The size of the image messages and network conditions may affect the time in which the image messages are received. The camera notifies you with a text message if the image sending fails.

If sending the image fails, the camera automatically tries to resend the image later.


To capture an image with Remote Camera Manager, start the Remote Camera Manager application on your mobile phone, select **Imaging**, and select whether to capture a still image or record a video clip. You can ask the camera to send the image to your mobile phone or to another mobile phone or e-mail address.

If you use a Bluetooth connection, the camera sends you the captured still images free of cost. However, video clips are always sent using the GSM network.

## ■ Call the camera

To listen to the camera premises, make a phone call to the camera.

During the call, image messages are put on hold and sent after the call. All camera users are allowed to call the camera.

When a call is active, the light indicator  blinks orange.

If your phone is set to hide the caller's identity from the recipients of your calls, you cannot call the camera. The camera must be able to verify your number before accepting your call.

When the camera is sending images, it cannot answer phone calls.



**Note:** Obey all local laws governing listening. Do not use this feature illegally.

To call the camera with Remote Camera Manager, select **Call camera** from the main menu. To end the call, press the end key on your mobile phone.

## ■ Motion detection

The camera has a motion detector with which you can set the camera to send you text messages, images, or video clips automatically every time the camera detects motion. You can adjust the sensitivity of the motion detector, and select which camera users receive motion detection

messages from the camera. You can operate the motion detector with text messages or Remote Camera Manager.


If the temperature surrounding the camera rapidly changes, for example, when moving the camera indoors to outdoors, motion detection may not function properly. To avoid this, let the camera adjust to the temperature for 30 minutes before activating motion detection.

↵ indicates a space.

**To set on motion detection**, send the following text message to the camera:


2

Motion detection is set on immediately or in a timed manner, depending on which mode was active the last time motion detection was used.

You can also set on motion detection by quickly pressing the power button on the camera. The light indicator  blinks red, and you have 60 seconds to leave the premises before motion detection is activated.

**To set on motion detection immediately**, send the following text message to the camera:

2↵1

The light indicator  blinks red while motion detection is activating. When the light indicator is red, the motion detection is active.

By default, motion detection is set off automatically when the camera has sent you one motion detection message. **To define the number of motion detection events before the automatic deactivation**, select the desired number of events (0-99), and send the following text message to the camera:

2↵4↵number of events

Example:

2 4 25

Now the camera sends you 25 motion detection notifications, before motion detection is set off. If you select 0 as the number of events, motion detection remains on until you set it off.

**To set on timed motion detection**, define the activation (or activation and deactivation) time, and send the following text message to the camera:

2 2 2 activation time

or

2 2 2 activation time deactivation time

Example:

2 2 08:00 am 04:15  
pm

If the camera uses the 24 hour clock, use the 24-hour format in the commands as well. See "Time and date settings" on page 42.

**To set off motion detection**, send the following text message to the camera:

2 0

The size of the image messages and network conditions may affect the time in which the image messages are received.

The camera notifies you with a text message if sending the motion detection images fails. The camera automatically tries to resend the images later.

The camera sends various notifications to the master user, for example, when a power cut occurs. See "Notification settings" on page 44.



## Motion detection settings

To select another recipient for motion detection messages, send the following text message to the camera:

2↵3↵user name or phone number

Example:

2 3 Jane

To send motion detection messages to several recipients, send the following text message to the camera:

2↵3↵user names or phone numbers

Example:

2 3 Jane Peter Mike

The recipients must be defined as users of the camera.

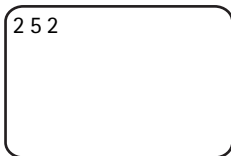
To send motion detection images to all camera users, send the following text message to the camera:

2↵3

To define the motion detection type, select text message (1), still image (2), video clip (3), text message and still image (4), text message and video clip (5), still image and video clip (6), or text message, still image, and video clip (7); and send the following text message to the camera:

2↵5↵number of type

Example:



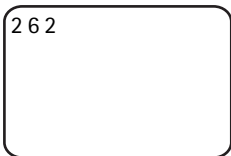
Now the camera sends you a still image each time it detects motion.

The default type is still image.

**To define the number (1–3) of still images captured when motion has been detected**, send the following text message to the camera:

2↵6↵number of images

Example:



Now the camera captures two images each time it detects motion.

The default number is 1.

If the images are too large to be sent as one MMS message, they are sent as several MMS messages.

**To adjust the sensitivity of the motion detector**, select normal (1) or sensitive (2), and send the following text message to the camera:

2↵7↵number

The default value is normal.

**To see the current motion detection settings** of the camera, send the following text message to the camera:

2↵?

**To see the value of a single motion detection setting**, send the following text message to the camera:

2↵?↵number of the setting

For example, if you want to see how many images the camera captures when it detects motion, send the following text message to the camera:



2 ? 6

## Use motion detection with Remote Camera Manager

To use motion detection with Remote Camera Manager, select **Motion detection** from the main menu. You can set motion detection on and off, choose recipients for motion detection messages, and select the type for motion detection notifications. You can also select how many times the camera detects motion before it deactivates the motion detector. To set on motion detection at a certain time, define the start and end times in the **Detection time** field. To remove the set times, select **Options > Clear time**. When you have made all the necessary configurations, select **Options > Send** to send the changed settings to the camera. To see the current motion detection settings in the camera, select **Options > Get current settings**.

The camera saves the latest motion detection events to its image memory. To retrieve these images or video clips later, select **Options > Retrieve**. This feature is available only when using a Bluetooth connection between the camera and the mobile phone. Switching off the camera empties the image memory of the camera.

## ■ Timed imaging

The clock in the camera enables timed imaging. You can set the camera to send still images and video clips at defined intervals. You can also set the camera to send images every day at a certain hour. You can select which camera users receive timed images. Control timed imaging with text messages or Remote Camera Manager.

↵ indicates a space.

**To set on timed imaging**, send the following text message to the camera:

4

Timed imaging is set on with the settings that were active the last time timed imaging was used.

**To set on timed imaging and define the interval** (hours and minutes) in which the images are captured, send the following text message to the camera:

4 1 hh:mm

Example:



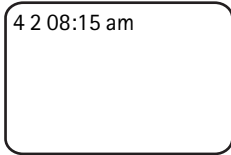
4 1 2:00

Now the camera captures images in two hour intervals. The shortest possible interval is 5 minutes.

**To set the camera to capture images at a certain hour**, send the following text message to the camera:

4 2 time

Example:



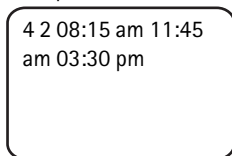
4 2 08:15 am

Now the camera captures an image every day at 8:15 a.m.

If the camera uses the 24 hour clock, use the 24-hour format in the commands as well. See "Time and date settings" on page 42.

In one message you can define 1-3 different times when images are captured.

Example:



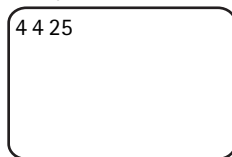
The size of the image messages and network conditions may affect the time in which the image messages are received.

The camera notifies you with a text message if sending the timed images fails. The camera automatically tries to resend the images later.

By default, timed imaging is deactivated automatically when the camera has sent one timed imaging message. **To define the number of timed images before the automatic deactivation**, select the desired number of images (0-99) and send the following text message to the camera:

4↵4↵number of images

Example:



Now the camera sends you 25 images before setting off the timed imaging function. If you select 0 as the number of images, timed imaging remains on until you set it off.

**To set off timed imaging**, send the following text message to the camera:

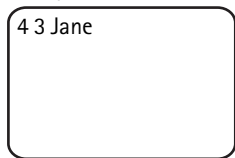
4↵0

### Timed imaging settings

**To send timed images to another recipient**, send the following text message to the camera:

4┐3┐ user name or phone number

Example:

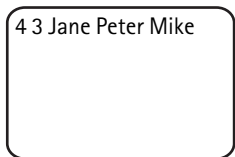


4 3 Jane

**To send timed images to several recipients**, send the following text message to the camera:

4┐3┐ user names or phone numbers

Example:



4 3 Jane Peter Mike

The recipients must be defined as users of the camera.

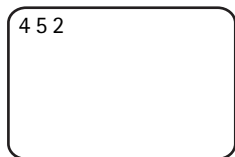
**To send timed images to all camera users**, send the following text message to the camera:

4┐3

**To define the timed image type**, select still image (1) or video clip (2), and send the following text message to the camera:

4┐5┐ number of type

Example:



4 5 2

The default type is still image.

**To see the current timed imaging settings** of the camera, send the following text message to the camera:

4␣?

To see the value of a single timed imaging setting, send the following text message to the camera:

4␣?␣number of setting

For example, if you want to see the interval in which the camera captures images, send the following text message to the camera:

4 ? 1

## Use timed imaging with Remote Camera Manager

If you want to use timed imaging with Remote Camera Manager, select **Timed imaging** from the main menu. You can set timed imaging on and off, select whether to capture images or video clips, and choose the camera users to whom the timed images are sent. You can set the camera to send 1-3 images at a certain time every day or at defined intervals. You cannot set both of these timed imaging types on at the same time. When the camera has captured the number of timed images you have defined, timed imaging is set off. When you have made all the necessary configurations, select **Options > Send** to send the changed settings to the camera. To see the current timed imaging settings in the camera, select **Options > Get current settings**.

## ■ Thermometer

The camera contains a thermometer, which enables monitoring the temperature in the camera premises. The camera records the temperatures during the last 24 hours, and sends the information as a text message at request. You can also set the camera to send you a text message automatically when the temperature in the camera premises reaches a defined limit. Control the thermometer functions with text messages or Remote Camera Manager.

The thermometer provides general measurements for personal use that may vary from scientific measurements.

3┐ indicates a space.

**To check the temperature in the camera premises**, send the following text message to the camera:

3

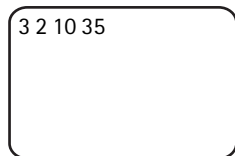
**To check the temperature in the camera premises during the past 24 hours**, send the following text message to the camera:

3┐1

You can set the camera to notify you with a text message when a certain temperature is reached in the camera premises. **To set the temperature notification on and define the low and high temperature limits**, send the following text message to the camera:

3┐2┐low limit┐high limit

Example:



Now the camera sends you a text message when the temperature in the camera premises drops to 10 degrees or rises to 35 degrees.

When the camera has sent you a notification about a reached temperature limit, the temperature notification is set off automatically.

**To set off the temperature notification**, send the following text message to the camera:

3┐0

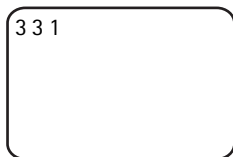
## Thermometer settings

The SIM card in the camera determines which temperature scale is used: Celsius or Fahrenheit. **To change the temperature scale**, select Celsius (1) or Fahrenheit (2), and send the following text message to the camera:

3┐3┐number of scale



Example:



Now the camera uses Celsius as the temperature scale.

**To check the current thermometer settings**, send the following text message to the camera:

331?

### Use the thermometer with Remote Camera Manager

If you want to use the thermometer with Remote Camera Manager, select **Thermometer** from the main menu. To see the temperatures in the camera premises during the last 24 hours, select **Options > Current temperature**. You can set the temperature alarm on and off, and define the temperature limits. When you have made all the necessary configurations, select **Options > Send** to send the changed settings to the camera. To see the current thermometer settings in the camera, select **Options > Get current settings**.

## 4. User settings

---

### ■ Define the master user

Only the master user is able to add or remove users for the camera. A maximum of 10 users, including the master user, can be defined to the camera. There can only be one master user at a time.

The master user has access to all camera functions and can define access rights for other users. See "User settings" on page 36.

When you define a new master user, the old master user remains as a regular camera user.

The camera identifies the users by their phone numbers and user names.

␣ indicates a space.

**To set a new master user**, select whether to send all images to the master user's mobile phone (1) or e-mail address (2), and send the following text message to the camera:

6␣master user passcode␣user name␣phone number␣e-mail address␣number

Example:



```
6 12345 Jane
98765432
jane@office.com 1
```

Now Jane is set as the master user and the camera sends all images to Jane's mobile phone.

The predefined master user passcode is 12345. See "User authentication settings" on page 45 for information on how to change the passcode. It is recommended that you change the passcode as soon as possible. Keep the new code safe and separate from your phone and camera. Do not give the code to others as changing some of the camera settings is possible only with the master user passcode.

The maximum length of the user name is 20 characters, and it must not contain any special characters or spaces.

It is not mandatory to define the e-mail address.

**To check the information of the master user**, send the following text message to the camera:

6␣master user passcode␣?

If there is no master user defined, this command does not function.

## ■ Add users

␣ indicates a space.

**To add a user**, select whether to send all images to the user's mobile phone (1) or e-mail address (2), and send the following text message to the camera:

5 ␣ user name ␣ phone number ␣ e-mail address ␣ number

Example:

5 Mark 12345678  
mark@work.com 2

Now the camera adds Mark as a user and sends all images to Mark's e-mail address.

It is not mandatory to define the e-mail address.

If the new user's user name or phone number corresponds to those of an existing user, the new user replaces the old user.

**To remove a user**, send the following text message to the camera:

5 ␣ 0 ␣ user name or phone number

Example:

5 0 Mark

The master user cannot be removed.

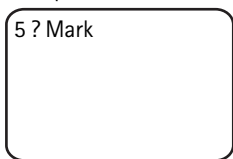
**To check the current user list**, send the following text message to the camera:

5 ␣ ?

**To check the information of a user**, send the following text message to the camera:

5 ␣ ? ␣ user name or phone number

Example:



### User settings

The master user can set the camera to a normal access mode or extended access mode.

In the normal access mode, the users can:

- Capture images and videos.
- Check the temperature in the camera premises.
- Make a phone call to the camera and listen to the camera premises.
- Set motion detection on and off.

In the extended access mode, the users can:

- Capture images and videos.
- Check the temperature in the camera premises.
- Make a phone call to the camera and listen to the camera premises.
- Set motion detection on and off with their own settings.
- Set timed imaging on and off with their own settings.
- Set temperature notification on and off with their own settings.
- Select whether to receive images to a phone number or e-mail address.
- Select the motion detection type (still image, video clip, or text message).
- Select the timed imaging type (still image or video clip).

**To set on the normal access mode**, send the following text message to the camera:

8↵1

**To set on the extended access mode**, send the following text message to the camera:

8↵2

**To check the current access mode**, send the following text message to the camera:

8↵?

The default access mode is normal.

**To set the camera to send a message to the master user every time a user sets camera functions on or off**, send the following text message to the camera:

9↵1

**To set this feature off**, send the following text message to the camera:

9↵0

**To check whether this feature is on or off**, send the following text message to the camera:

9↵?

The default value is off.

The master user can select whether to send images to a user's mobile phone or e-mail address. **To set the mobile phone as the address where all images are sent**, send the following text message to the camera:

7↵user name or phone number↵1

Example:

7 Jane 1

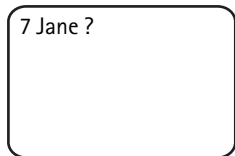
**To set the e-mail address as the address where all images are sent**, send the following text message to the camera:

7↵user name or phone number↵2

To check the address used, send the following text message to the camera:

7 ↵ user name or phone number ↵?

Example:



By default, images are sent to phone numbers.

### Define the user settings with Remote Camera Manager

If you want to change the user information in the camera, select **Settings > Users**. To see the current user list, select **Options > Download user list**. To set up a new user, select **Options > Add user**. To remove a user from the camera, select the user, and select **Options > Remove user**. You can change the master user's information, but not remove the master user from the camera.

## 5. Configure the settings

---

### ■ Camera settings

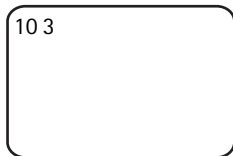
↵ indicates a space.

#### Image and video settings

To set the image resolution, select compact (1), normal (2), high (3) or highest (4) resolution, and send the following text message to the camera:

10 ↵ number of resolution

Example:



Now the camera uses high resolution when capturing images.

**To check the current resolution**, send the following text message to the camera:

10↵?

The default resolution is high.

**To define the size of video clips**, select normal (1) or large (2), and send the following text message to the camera:

11↵number of size

Normal is 100 kB and suitable for MMS messages. Large is 300 kB and can be sent as Internet e-mail only, not as an MMS message. See "Internet e-mail settings (SMTP)" on page 51.

The default video clip size is normal.

**To check the current size**, send the following text message to the camera:

11↵?

**To include audio in video clips**, send the following text message to the camera:

12↵1

**To exclude audio from video clips**, send the following text message to the camera:

12↵0

**To check the current audio settings**, send the following text message to the camera:

12↵?

By default, audio is included in video clips.

**To set the zoom on**, send the following text message to the camera:

13┐1

To set the zoom off, send the following text message to the camera:

13┐0

To check the current zoom setting, send the following text message to the camera:

13┐?

By default, the zoom is off.



**Tip:** If you are using Remote Camera Manager, you find these settings in **Settings > Camera**. If you want to check the current camera settings, select **Options > Get current settings**. When you have made all the necessary configurations, select **Options > Send** to send the changed settings to the camera.

## General camera settings

To set a name for the camera, send the following text message to the camera:

14┐name of the camera

The name can be 20 characters long and must not contain any spaces.

To get a list of available languages for the camera, send the following text message to the camera:

18

To set the language for the camera, select the desired language from the list, and send the following text message to the camera:

18┐number of language in the list

Example:

18 3



The camera now uses the third language in the list when replying to your text messages.

**To set the camera to use the language of the SIM card**, send the following text message to the camera:

18↵0

**To check the current language**, send the following text message to the camera:

18↵?

By default, the camera uses the language of the SIM card in the camera.

**To check the status of the back-up battery of the camera**, send the following text message to the camera:

20↵?

**To restore the pre-configured factory settings to the camera**, send the following text message to the camera:

26↵master user passcode

Sending this message clears the user settings and restarts the camera.

**To check the IMEI code and the hardware and software versions of the camera**, send the following text message to the camera:

28↵?

The master user can check how many messages the camera has sent. **To check the number of messages sent**, send the following text message to the camera:

31↵?

**To clear the message counter**, send the following text message to the camera:

31↵0

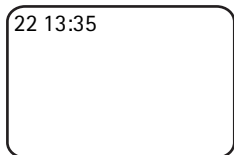
## Time and date settings

Each time the camera receives a text message with which a new master user is created, the camera starts using the time and date found in that text message.

**To set the clock of the camera in 24-hour format**, send the following text message to the camera:

22└hh:mm

Example:

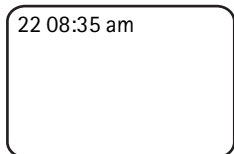


22 13:35

**To set the clock of the camera in 12-hour format am**, send the following text message to the camera:

22└hh:mm└am

Example:



22 08:35 am

**To set the clock of the camera in 12-hour format pm**, send the following text message to the camera:

22└hh:mm└pm

By default, the camera selects the time format automatically.

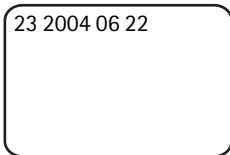
**To check the current time from the camera**, send the following text message to the camera:

22└?

**To set the date of the camera**, send the following text message to the camera:

23└yyyy└mm└dd

Example:



**To check the current date**, send the following text message to the camera:

23↵?

**To set the date format**, select year-month-day (1), month-day-year (2), or day-month-year (3); and send the following text message to the camera:

24↵number

By default, the camera selects the date format automatically.

**To check the current date format**, send the following text message to the camera:

24↵?

**To set the camera to update the date and time automatically** using the information in the GSM network, send the following text message to the camera:

25↵1

The camera restarts automatically after the automatic update is set on.

This feature is available only if the network supports it.

Do not send any other commands in this text message.

**To set off the automatic time and date update**, send the following text message to the camera:

25↵0

**To check whether the automatic time and date update is in use**, send the following text message to the camera:

25↵?

By default, the automatic time update is off.



**Tip:** If you are using Remote Camera Manager, select **Settings > Time settings**. When you have made all the necessary configurations, select **Options > Send** to send the changed settings to the camera. To see the current time settings in the camera, select **Options > Get current settings**.

## Notification settings

The master user can set the camera to send notification text messages when:

- The battery is low, and the camera shuts down.
- The temperature in the camera premises drops too low or rises too high for the camera to operate, and the camera shuts down.
- The camera switches on after a power cut.
- The camera switches on after a temperature limit violation.
- There is a power cut, and the back-up battery is in use.
- Motion detection is disabled.
- Timed imaging is disabled.
- Motion detection is on, and the camera is shut down with the power button.

**To set on the notifications**, send the following text message to the camera:

29┐1

**To set off the notifications**, send the following text message to the camera:

29┐0

**To check whether the notifications are in use**, send the following text message to the camera:

29┐?

By default, the notifications are in use.

If you are using Remote Camera Manager, select **Settings > General** to find this setting.

When you change a setting, the camera sends you a confirmation message. **To set off the confirmation messages**, send the following text message to the camera:

30┐0

**To set on the confirmation messages**, send the following text message to the camera:

30┐1

**To check the current confirmation message setting**, send the following text message to the camera:

30┐?

By default, the confirmation messages are on.

## ■ Security settings

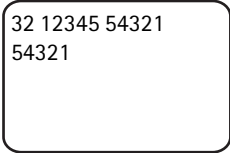
┐ indicates a space.

### User authentication settings

The master user can change the master user passcode. **To change the passcode**, send the following text message to the camera:

32┐old code┐new code┐new code

Example:



32 12345 54321  
54321

The master user passcode must be 5 digits long.

The camera users are authenticated by their phone numbers. Only the users that the master user has added to the user list are able to use the camera. By setting off the user authentication, you allow the camera to let everyone capture images. **To set off user authentication**, send the following text message to the camera:

33┐0

**To set on user authentication**, send the following text message to the camera:

33↵1

**To check whether user authentication is in use**, send the following text message to the camera:

33↵?

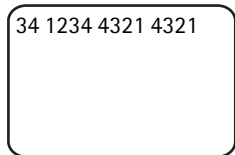
By default, the user authentication is on.

## PIN code settings

**To change the PIN code of the SIM card in the camera**, send the following text message to the camera:

34↵old PIN code↵new PIN code↵new PIN code

Example:



34 1234 4321 4321

The master user can set the camera to query for the PIN code of the SIM card in the camera each time the camera is switched on. When the PIN code query is on, the SIM card is secure, and its use in other GSM devices is disabled.

You only need to enter the PIN code manually during the first start-up. The camera stores the PIN code in its memory, and uses it automatically in later start-ups.

**To set on the PIN code query**, send the following text message to the camera:

35↵PIN code↵1

Example:

35 4321 1

To set off the PIN code query, send the following text message to the camera:

35 ↵ PIN code ↵ 0

To check whether the PIN code query is on, send the following text message to the camera:

35 ↵ PIN code ↵ ?

Example:

35 4321 ?



**Tip:** If you are using Remote Camera Manager, select **Settings > Security**.

## ■ Connection settings

↵ indicates a space.

### MMS settings

To request the network operator to send the MMS settings over the air, send the following text message to the camera:

39 ↵ service number ↵ service text

If you have defined a master user for the camera, only the master user is able to request these settings. You get the service number and service text from your network operator.

The MMS settings of the Nokia Remote Camera are the same as those of the Nokia 7610 phone.

When you have requested these settings, you are prompted to accept or discard the new settings. **To accept the new settings**, send the following text message to the camera:

99

**To discard the new settings**, send the following text message to the camera:

88



**Tip:** If you are using Remote Camera Manager, select **Settings > Connection**.

### Access point settings

You only need to configure the access point settings manually if the automatic MMS settings of the camera do not function, and your operator does not support sending the settings over the air.

An MMS access point contains all the needed MMS settings. **To create a new MMS access point for the camera**, start the text message with 40, and then add the following settings to the message:

- 1 ↵ connection name
- 2 ↵ access point name
- 3 ↵ user name for the access point connection
- 4 ↵ password for the access point connection
- 5 ↵ access point home page address
- 6 ↵ 1 (normal connection authentication) or 6 ↵ 2 (secure connection authentication)
- 7 ↵ 1 (connection security on) or 7 ↵ 0 (connection security off)
- 8 ↵ 1 (temporary session mode) or 8 ↵ 2 (permanent session mode)
- 9 ↵ IP address of the camera or 9 ↵ 0 if you want the camera to select the IP address automatically
- 10 ↵ IP address of the primary name server
- 11 ↵ IP address of the secondary name server
- 12 ↵ IP address of the proxy server



- 13 ↵ number of the proxy port

Example:

```
40 1 home 2 operator
3 helenmill 4 4321 5
http://mms.operator.fi
6 2 7 1 8 1 9 0 10
123.145.167.189
```

The connection name, access point name, user name, and the password cannot contain any spaces.

If you do not need to configure a setting for the access point, leave the number of this setting out from the message. For example, if you do not need to enter your user name and password, leave them out.

Example:

```
40 1 home 2 operator
5 http://
mms.operator.fi 6 2 7
1 8 1 9 0 10
123.145.167.189
```

**To modify any of the access point settings**, start the text message with 41, enter the number of the access point on the access point list, and write the rest of the text message. For example, **to edit the connection name**, send the following text message to the camera:

41 ↵ access point number ↵ 1 ↵ new connection name

Example:

```
41 2 1 MMS
```

Now the camera sets MMS as the name of the connection for the second access point on the access point list.

**To obtain a list of defined access points**, send the following text message to the camera:

40↵?

**To remove an access point from the list**, send the following text message to the camera:

40↵0↵number of access point on the list

Example:

40 0 3

Now the camera removes the access point that is third on the list.

**To check the settings of an access point**, send the following text message to the camera:

40↵?↵number of access point on the list

**To set an access point for MMS messaging**, send the following text message to the camera:

42↵number of access point on the list

**To check the current MMS access point**, send the following text message to the camera:

42↵?

**To set an access point for SMTP messaging**, send the following text message to the camera:

43↵number of access point on the list

**To check the current SMTP access point**, send the following text message to the camera:

43↵?



**Tip:** If you are using Remote Camera Manager, select **Settings > Connection**. To see the current camera connection settings, select for example **MMS settings > Options > Get current settings**.

## Internet e-mail settings (SMTP)

In addition to MMS, the camera is also capable of sending images and video clips to an Internet e-mail address using a GPRS connection and SMTP protocol. To use the Internet e-mail option, do the following:

- Define and use an access point suited for sending e-mail. See "Access point settings" on page 48.
- Define the settings of your e-mail server, as described in this section.
- Select SMTP as the sending protocol of the camera, as described in this section.
- Define the e-mail addresses of the camera users, and select e-mail as the default sending address of the users. See "Add users" on page 34.

When the SMTP protocol is used, the camera can send, for example, motion detection images only to an e-mail address, not to a mobile phone directly. However, the users can still capture images, and have them sent to their mobile phones using MMS.

For information on e-mail settings, contact your service provider.

**To define the name of the mailbox**, send the following text message to the camera:

44↵1↵mailbox name

**To configure your e-mail address in the e-mail server you are using**, send the following text message to the camera:

44↵2↵e-mail address

**To set the outgoing mail server address**, send the following text message to the camera:

44↵3↵mail server address

**To set your user name for the SMTP connection**, send the following text message to the camera:

44↵4↵user name

**To set the password for the SMTP connection**, send the following text message to the camera:

44↵5↵password

**To check the current e-mail settings**, send the following text message to the camera:

44 ↵?



**Tip:** If you are using Remote Camera Manager, select **Settings > Connection**.

**To set the bearer for multimedia messages**, select MMS for sending the messages to a mobile phone (1) or SMTP for sending the messages to e-mail (2), and send the following text message to the camera:

38 ↵ number of bearer

Example:

38 1

Now the camera sends multimedia messages using MMS.

**To check the current message bearer**, send the following text message to the camera:

38 ↵?

By default, the bearer is MMS.



**Tip:** If you are using Remote Camera Manager, select **Settings > Camera**.

## GSM network settings

The master user can select the network operator to be used, for example, when roaming from one network to another. **To see a list of available networks**, send the following text message to the camera:

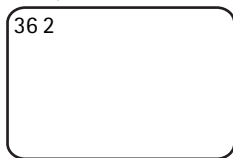
36

The list contains the names of the available network operators and their numbers.

**To select a network operator**, send the following text message to the camera:

36↵number of operator on the operator list

Example:



Now the camera uses the network operator that is second on the operator list.

**To set the camera to select the network operator automatically,** send the following text message to the camera:

36↵0

**To check which network operator is currently in use,** send the following text message to the camera:

36↵?

By default, the automatic network selection is on.

**To set the phone number for the short message centre,** send the following text message to the camera:

37↵phone number of short message centre

If the phone number is wrong, the camera cannot send you any messages.

Most operators have the phone number of their short message centre ready on the SIM card; you do not need to change it.

**To check the current short message centre phone number,** send the following text message to the camera:

37↵?

## ■ Configure the camera with a PC

If you want to configure the camera with PC software, you can download the Nokia Remote Camera PC Configurator software at [www.nokia.com](http://www.nokia.com). PC Configurator supports the Windows 2000/XP operating system, and requires 15 MB of free disk space. To use PC Configurator, you need a compatible PC that connects to the camera

with Bluetooth wireless technology or the DKU-2 data cable available as a separate enhancement. For more information about PC connectivity, see the online help of PC Configurator.

### Establish a cable connection

- 1 Open the back cover of the camera, and connect the DKU-2 data cable to the data connector of the camera and to a PC. See "Figure 3" on page 11.
- 2 Switch on the camera, and wait until your PC detects the camera.
- 3 From the PC Configurator main menu, select **File > Connection settings**, and select the correct COM port. Click **OK**.

You can now start using PC Configurator.

### Establish a Bluetooth connection

If your PC supports Bluetooth wireless technology, you can connect the PC to the camera using Bluetooth. For information about starting Bluetooth on your PC and the Bluetooth address of the PC, refer to the user guide of your PC or the PC Bluetooth device.

- 1 Make sure that the Bluetooth radio in the PC is enabled, the PC is within 10 metres of the camera, and there are no obstacles between the camera and the PC.
- 2 Send the following text message to the camera:  
83 ↵ Bluetooth address of the PC  
The camera accepts this message from the master user only.
- 3 The camera connects to the PC. When the PC prompts for the Bluetooth passcode, enter the current master user passcode.

If this does not work, do the following:

- 1 Send the following text message to make the Bluetooth radio of the camera visible:  
81 ↵ 1
- 2 Open the Bluetooth device discovery application on your PC. The

application displays the available Bluetooth devices.

- 3 Select the camera, and create a serial port connection to it. For more information, refer to the user guide of your PC or the PC Bluetooth device. When you start the PC Configurator software, select the corresponding serial port from the PC Configurator connection settings.
- 4 After creating the connection, you can set the camera Bluetooth radio back to the hidden mode with the following text message:  
81↵0

If the master user has not been created for the camera, anyone can create a Bluetooth connection between the camera and a PC.

## 6. Light indicators


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The camera has light indicators that show the status of the camera functions. See "Figure 1" on page 10.

### Start-up

When the camera is starting up, the light indicators are green, and they scroll up and down.

### Battery status

The battery LED  shows the status of the back-up battery:

Green: The battery is full.

Green blink: The camera is connected to an external power source, and the battery is charging.

Orange: The battery is half empty.

Red: The battery is weak; charge the battery.

### Signal strength status

The signal strength LED  shows the status of the GSM network:

Green: Good signal strength

Orange: Adequate signal strength

Red: Poor signal strength

Red blink: No network connection

### Camera status

The camera LED  shows the status of the camera:

Green: The camera is in idle mode.

Green blink: The camera is sending an image.




Orange: The camera is shooting a video clip.

Orange blink: An audio call is on.

Red: Motion detection is on.

Red blink: Motion detection is activating.

### SIM card status

			Status
Red & green blink	Red & green blink	Red & green blink	Insert SIM card correctly
Orange blink	Orange blink	Orange blink	SIM card rejected
Red blink			Insert PIN code
Red blink	Red blink		Insert PUK code
Red blink	Red blink	Red blink	Product failure, contact service

If you want to avoid bringing too much attention to the camera, you can set the light indicators off.

**To set off the light indicators of the camera**, send the following text message to the camera:

19┐0

**To set on the light indicators of the camera**, send the following text message to the camera:

19┐1



To check whether the light indicators are in use, send the following text message to the camera:

19┐?

## 7. Enhancements

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The available enhancements for the Nokia Remote Camera are:

- Nokia Mobile Charger LCH-12: multi-voltage charger that plugs into the cigarette lighter and charges the camera battery.
- Nokia Battery BL-5C: Li-Ion based battery that provides power in a thin and light package.
- Nokia Connectivity Cable DKU-2: a USB cable for connecting a compatible PC and the camera. This cable supports the use of PC Configurator software. The cable needs its own driver to function.

Keep all accessories and enhancements out of the reach of small children.

When you disconnect the power cord of any accessory or enhancement, grasp and pull the plug, not the cord.

## 8. Care and maintenance

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Your device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you protect your warranty coverage.

Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.

Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.

Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.

Do not attempt to open the device other than as instructed in this guide.

Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.

Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.

Do not paint the device. Paint can clog the moving parts and prevent proper operation.

Use a soft, clean, dry cloth to clean any lenses (such as camera, motion detector, and light sensor lenses).

All of the above suggestions apply equally to your device, battery, charger, or any enhancement. If any device is not working properly, take it to the nearest authorized service facility for service.

## 9. Additional safety information

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### Operating environment

Remember to follow any special regulations in force in any area and always switch off your device when its use is prohibited or when it may cause interference or danger. Use the device only in its normal operating positions. To maintain compliance with radio frequency exposure guidelines only use enhancements approved by Nokia for use with this device.

### Medical devices

Operation of any radio transmitting equipment, including wireless phones, may interfere with the functionality of inadequately protected medical devices. Consult a physician or the manufacturer of the medical device to determine if they are adequately shielded from external RF energy or if you have any questions. Switch off your device in health care facilities when any regulations posted in these areas instruct you to

do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

## **Pacemakers**

Pacemaker manufacturers recommend that a minimum separation of 6 in. (15.3 cm) be maintained between a wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should always keep the device more than 6 in. (15.3 cm) from their pacemaker when the device is switched on.

If you have any reason to suspect that interference is taking place, switch off your device immediately.

## **Hearing aids**

Some digital wireless devices may interfere with some hearing aids. If interference occurs, consult your service provider.

## **Vehicles**

Do not install the camera in a vehicle. Do not use the Nokia Remote Camera or your mobile phone to control or configure the camera while driving; park the vehicle first.

Remember road safety always comes first!

Using your device while flying in aircraft is prohibited. Switch off your device before boarding an aircraft. The use of wireless teledevices in an aircraft may be dangerous to the operation of the aircraft, disrupt the wireless telephone network, and may be illegal.

## **Potentially explosive environments**

Switch off your device when in any area with a potentially explosive atmosphere and obey all signs and instructions. Potentially explosive atmospheres include areas where you would normally be advised to turn off your vehicle engine. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Switch off the device at refuelling points such as near gas pumps at service stations. Observe restrictions on the use of radio equipment in fuel depots, storage, and distribution areas, chemical plants or where blasting operations are in

progress. Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

## 10. Technical specifications

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<b>Operating temperature</b>	Full functionality: -20°C to +40°C Reduced functionality: +40°C to +50°C
<b>Relative humidity</b>	4%...100%
<b>Lighting</b>	The camera captures colour images in normal lighting conditions. For low light conditions the camera includes an infrared light source. Images captured with infrared light are in greyscale. The coverage area of the infrared light is approximately 5 metres.
<b>Focus area</b>	Minimum 0.5 meters
<b>Resolution</b>	Still image: 1152 x 864 (highest), 640 x 480 (high), 320 x 240 (normal), 160 x 120 (basic) Video clip: 176 x 144
<b>Video clip length</b>	MMS: 10 seconds minimum SMTP: 30 seconds minimum
<b>Image format</b>	. jpeg
<b>Video format</b>	H.263
<b>Camera view angle</b>	Normal: 55 degrees Zoomed: 28 degrees
<b>Motion detection coverage area in room temperature</b>	Normal: 5 metres Sensitive: 8 metres The distance from which the camera detects motion depends on the surrounding temperature.
<b>Audio connection</b>	Normal speech within 4 metres
<b>Back-up battery operating time in room temperature</b>	In standby: up to 12 hours When motion detection is active: up to 5 hours
<b>Protection class</b>	IP 54
<b>Environmental class</b>	ETSI 300 019-2-4, class 4.2H

## 11. List of commands

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Action	Message
Capture a still image	1
Capture a video clip	1 ↵ 1
Set on motion detection using the previous settings	2
Set on motion detection immediately	2 ↵ 1
Set on timed motion detection	2 ↵ 2 ↵ activation time ↵ deactivation time
Define the number of motion detection events	2 ↵ 4 ↵ number of events 0-99
Set motion detection off	2 ↵ 0
Set on timed imaging using the previous settings	4
Set on timed imaging and define the interval for images	4 ↵ 1 ↵ hh:mm
Set the camera to capture images at a certain hour	4 ↵ 2 ↵ time
Define the number of timed images	4 ↵ 4 ↵ number of events 0-99
Set timed imaging off	4 ↵ 0
Check the temperature in the camera premises	3
Check the temperature in the camera premises during the past 24 hours	3 ↵ 1
Set the temperature notification on and define the low and high temperature limits	3 ↵ 2 ↵ low limit ↵ high limit
Set temperature notification off	3 ↵ 0
Check the value of a setting	Number of setting ↵ ?